UNITED STATES DEPARTMENT OF AGRICULTURE

Paperwork Management Council

PROGRAM REPORT - MEETING
OF JUNE 25, 1963

OPERATION "MICROFILM - USDA"

SPEAKERS:

JOHN A. VLACHOS – GENERAL SERVICES ADMINISTRATION
EDWARD W. SCHULTZ – FOREST SERVICE
C. E. WYLIE – OFFICE OF PLANT AND OPERATIONS

PAPERWORK SYSTEMS IN ACTION

ABOUT THE PROGRAM

There is growing interest in microfilm, not only in the Department of Agriculture but throughout the Federal Government. New equipment and techniques are opening up new possibilities for meeting old problems of space and storage, as well as for meeting special space age needs in information handling.

General Services Administration has plans for stepping up its regional microfilming services, and for providing agencies with technical standards and guidance in the field of microfilming. John Vlachos, Chief of the Microfilm Branch, Records Center Division, National Archives and Records Service, describes the G.S.A. plans. He also describes the current status of microfilming in the Federal Government, and reviews some basic rules for identifying microfilming needs, for selecting the right equipment and services, and for preparing for a job of microfilming.

Forest Service is developing plans for instituting a systematic program of microfilming and microfilm utilization in its regional and forest supervisory offices. Ed. Schultz, Chief of the Division of Administrative Management, Forest Service, discusses these plans and some of the management factors involved in them.

Office of Plant and Operations has taken initial steps to recognize the potential uses of microfilm in the Department, and to assure sound management of microfilming activities, by issuing Plant and Operations Memorandums No. 74 and 76. Memorandum No. 74 provides for a Department-wide inventory of existing microfilm equipment. Memorandum No. 76 provides for systematic appraisal of contemplated microfilming projects, and for a starting inventory of such projects. C. E. Wylie, Chief of the Records Management Division, Office of Plant and Operations, briefly reviews these memorandums and Plant and Operations plans.

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USDA PAPERWORK MANAGEMENT COUNCIL -

The USDA Paperwork Management Council was established November 21, 1962, with approval of the Administrative Assistant Secretary. Everyone who works in, or is responsible for, some phase of paperwork management - anywhere in the Department of Agriculture - may consider himself a member of the Council. Through its meetings, programs and the distribution of information, the Council is designed to sharpen the interests and know-how of its members in the full range of paperwork management activities. Its broad purpose is to promote total effectiveness in USDA paperwork management, and to provide leadership and stimulus to related activities, such as information storage and retrieval, source data automation, and paperwork productivity and quality control. Council luncheon-program meetings are held about once each month. Members are notified in advance of meetings.

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OPERATION "MICROFILM - USDA"

John A. Vlachos, General Services Administration -

I want to thank the members of this Council for their kind invitation for me to be here this afternoon. I want to compliment all of you for your interest in microfilming, and I hope that what I have to say will help you with the difficult and important job of selecting the right equipment and the right projects for your microfilming.

First, let me bring you up-to-date on what we have done in GSA about microfilming. In January of this year, we sent a circular to the heads of all Federal agencies, announcing the availability of microfilming services by GSA. The circular provided two categories of services: Number 1, technical advice and assistance to all Federal Agencies in the following aspects of microfilming:

1. For the reduction of space, that is, disposal microfilming.

2. For the protection of records, either through the security copy device or for your vital records program.

3. For reproduction and distribution of records.

4. For preservation of valuable records.

5. To improve current information retrieval.

Number 2, centralized, reimbursable microfilming services. When I use the term reimbursable, I mean exactly reimbursable because we are not in business to make a profit. In other words, if it costs GSA a dollar to film a document, this is exactly what you would pay. We feel that we are a service organization and we are not in business to make a profit. The services described in the circular can be obtained through any one of our ten regional offices.

Another thing we are trying to do is let people know in Government how microfilming can be used as a tool. Microfilming doesn't mean a thing to many persons. The only thing they know is that you microfilm. So we have started work on a Microfilm Systems Application Handbook. The handbook will deal with each of the essential steps in a microfilm project, such as determining the objective of the project; the work situation; the filming process; and the benefits contemplated. The handbook will include a listing of the various types of equipment used in producing microfilm or printed copy. In addition to that, we plan

to publish a Records Management Handbook on Microfilming. This handbook will be similar to the Handbooks on Plain Letter Writing, Form Letters and Guide Letters.

Now, what is the picture, so far as the whole of Government is concerned? In other words, what are the projects? Where is the volume? Years ago, the prime emphasis was on disposal microfilming. Today, we feel that this is not a prime objective. We feel that the number one objective, so far as Government is concerned, is reproduction and distribution microfilming. In other words, operational or procedural microfilming.

Microfilming of engineering drawings has become a significant activity. An example of this is the Navy application. What the Navy does is microfilm the entire drawings of, let's say, a Polaris submarine. So, rather than send the original drawings or copies of the drawings aboard ship, they will mount the negative film into aperture cards into which has been key punched the necessary identifying data. On the ship they will have a reader-printer. If they are on duty or sea trials on the ocean and something happens to the steam pipes, they will pull out the aperture card which houses the filmed drawing of that particular steam pipe, put it into the reader, press a button, and in a matter of two or three or four seconds produce a useable paper copy. They may look at the drawing and wire the port that they are coming in for repairs. When they get to port, the necessary parts are ready for them, and they can make the repairs. That is a practical application of operational microfilming.

Similar applications are made in the Army, in connection with Signal Corps installations. And the same in the Department of Air Force in connection with the servicing of planes.

Civilian agencies have their special applications; for example, the Patent Office, in the Department of Commerce. The Office receives an average of about 1,500 requests a day for information about patents. These requests entail an estimated 120,000 or 125,000 individual copies in a typical eight hour working day. The requests come from users such as lawyers, or people who have patents on hand or on file in the Bureau, so they have got to get the copies out in a hurry. So, they microfilm the patent records or trade journals, and they film them on 100 foot filmstrips. The film is sent to the processing lab, then returned to the Patent Office. There they have, I believe, three continuous copy flow machines, and they produce all of the required prints in an eight hour working day. You can imagine the amount of equipment they would need to produce these prints by wet copy, or any other method, and keep up with the demand. These are some of the areas where microfilming does play a very important part.

We find that quite a few agencies are microfilming for vital records protection or security. We believe that in some cases the agencies are not microfilming the right records. However, this is an internal responsibility. Someone has to decide what is vital to the organization

in the event of a fire, bombing by the enemy, or some other disaster. But here again an analysis has to be made as to what you feel is vital to your organization. Providing security copies probably is the number two microfilming objective.

Number three, I would say, is for the purpose of providing a microfilm copy of the record to work with, in order to preserve the original documents. From the negative copy a positive copy is made, and the negative is stored for security purposes. The positive copy is the reference copy. So, in the event someone wants to look up a certain document, they do not go to the file and pull out the original copy. They go to the film file and pull out the positive copy, thread it onto a reader, and use that for reference purposes.

We find that more and more emphasis is being placed on microfilming for information retrieval. One of these projects is in the Navy Department. Veterans Administration has a microfilm application right now, which also is an information retrieval project. V. A. is filming all its clinical records and stripping them into 5x8 acetate jackets. From the jacket, a diazo copy is made. The diazo copy becomes the reference copy.

Unitized microfilming is essentially an information retrieval tool. However, information retrieval has its problems and its limitations, and an analysis has to be made to determine whether the benefits warrant setting up the microfilm operation.

A lot has been said about microfilming being an inexpensive process. I personally don't think that is so. I think that when you look at all the factors involved, you will find that most microfilm projects cost money. Sometimes a lot. Let's talk about the cost elements that go into the final product, whether it be in roll form or whether it be in an acetate jacket:

1. You normally have to include the cost of preparing the documents for microfilming, and in many cases this can be very costly.

2. Next is the actual filming of the records. This again, in many cases, can be costly. One reason I say it is costly is because we can't get the work done by GS-1's or 2's; we have to use GS-4's and 5's. In the middle of those grades, the cost is about $3.00 an hour.

3. When you have filmed the records, you have to inspect the film. Inspection depends, primarily, on the type of project you are going to have. For example, if you are going to film for disposal purposes, every document or image on the roll of film has to be inspected. This is a time consuming effort, and it is costly.

4. You have to buy the raw film stock. Then, you have to pay for having it processed. I don't think that many of you would have your own processing equipment. The only time we advocate owning your own processing equipment is when you film on a very large scale. But if the filming is going to be on a moderate or limited basis, it is a lot more economical to have the processing done commercially.

So far, we have the actual preparation, we have the filming, we have the inspection, we have the film, we have the processing. Then, you have to include the equipment cost. That is, your reader and camera. We feel that you should amortize the equipment cost over a five year period. In addition to that, if this is going to be a unitized system, you have the cost of typing the identifying data in the acetate jacket. You also have to include the cost of the acetate jacket or the aperture cards.

Another thing that is often omitted in calculating the cost of microfilming, is the cost of supervision. This has to be included, because you can't just tell an individual to go ahead and film something. Someone has to take time to give instructions and to check on the work, in order to make sure that the records are being filmed correctly. Another factor that has to be included is transportation or messenger service. Many agencies don't feel that this is justified, but we in NARS feel that it is a part of the operation - that as long as you have someone removing documents from the files, the cost of his time has to be included in the project. So, when you boil it down you have about eight or nine elements of cost that must be considered in undertaking a microfilming project.

On disposal microfilming, the NARS concept is as follows: We believe that records should be retained more than 30 years before you consider filming. If records are to be maintained for less than 30 years, we feel that they should not be filmed. Those records, we feel, should be stored at one of the Federal Records Centers. The reason for it is as follows: The national average cost to store a cubic foot of records at any one of our ten Federal Records Centers is roughly 45¢ to 50¢.

Now, in the case of disposal microfilming, the cost per cubic foot to film, can range anywhere from 30 to 60 dollars. The reason for the wide variation is that a lot depends on the kinds of records involved. If you are going to film bound volumes, a cubic foot of bound volumes, would require an estimated 2.5 rolls of film. Now this 2.5 rolls of film is the negative. In addition to that, you have 2.5 rolls of positive film.

Many of the projects in National Archives fall within the cost range of 50 to 60 dollars per cubic foot. If we are automatically feeding 3x5 cards, we can get by for about 4, 5, or 6 dollars a cubic foot. But I

would say as a general rule the average could be anywhere between 30 and 60 dollars. If we think in terms of subject files or classification files or personnel jackets, I think the figure could be about 26 or 27 dollars. This figure includes the elements I mentioned to you, including a positive copy.

Now, how do you select the right equipment for your microfilming project? This does present problems, and they can be costly problems. Unfortunately, today, rotary cameras will only accept documents of roughly 12 inches in width. If you have documents that are 14 or 15, or 16 inches wide, then you are forced to go to planetary equipment.

There are many rotary cameras on the market today, but my recommendation to you is this. If you are going to buy a piece of equipment or if you are going to rent a piece of equipment, you want to ask yourself, can I get the type of service I want.

Service is a very important factor in microfilming. If you buy a piece of equipment, you want assurance that the manufacturer of that equipment is in a position to give you adequate service. In other words, you don't want the camera to go haywire on Monday, and have a serviceman show up the following Friday. You want complete assurance that the manufacturer will make necessary repairs in a reasonable time, to protect you against too much down time on a piece of equipment.

Now as to buying versus renting. If you are going to go into an extensive microfilming project, I think you are forced to buy because, after three or four years of operation, you will have paid for the camera through rental. If you have a project that will last five or six months, and you have no other need for that piece of equipment, I think I would rent it. So in this problem of buying versus renting, a lot depends on the length of the project, and on whether you have, or contemplate, any other projects on which you can use the same identical equipment.

So, these are some of the factors that you have to take into consideration. There are many, many manufacturers on the market today. They all have lots of equipment, they all are willing to sell you equipment. But, as for what camera you should buy, this depends entirely on the project, the type of records involved, and the size and physical characteristics of the records. We find that in the majority of the applications in the Federal Government, today, planetary cameras are used. The so-called high speed camera is not being used too frequently. The big emphasis is on 35 mm planetary cameras.

Agencies that are filming for reproduction and distribution of documents use either roll film, aperture card or acetate jacket, or diazo sheet film. In NASA, instead of sending hard copies to their installations, they send a 5x8 diazo sheet film. Atomic Energy Commission has a 3x5 microcard program. However, I understand they are going to convert to

the same application that NASA has. ASTIA sends its customers ozalid copies in lieu of negative copies. The negative copy is retained by ASTIA.

Microfilming does have its place; there's no question about it. But I think that you have to pause and take a sharp, analytical look at it. We don't want to microfilm just to be in style. Wisely used, microfilming can improve operations and it can save a lot of money. But we have found agencies that have undertaken microfilming projects hastily, and have thrown their money down the drain. So, my advice to you is to use caution and analyze carefully, before making your decision and, more importantly, before spending any money.

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Edward W. Schultz, Forest Service -

The Forest Service has periodically reviewed the possible uses of microfilming, as a better management tool. It now appears that we have a growing need to use microfilming more than we have been. So far, only a few minor applications have been developed, and this has been due primarily to a lack of interest and knowledge of the use of microfilming by all of our program people.

Currently, we are again reviewing possible microfilm applications. The availability of new and improved equipment has stimulated some of our program people to make proposals for new management tools based on microfilm systems. We have just completed a field survey of what we are now doing in the microfilm field, and what proposals there are for additional use. There were as many opinions on the extent to which microfilm should be used as there was response. They ran the gamut from microfilming all records, to none. The responses were such, however, that we are convinced that now is the time for us to make a thorough study of what we need, and what systems and equipment would solve these needs.

Presently, in the records area, our current use for microfilm is restricted primarily to permanent leave and payroll records, retirement records, and indispensable records for storage at relocation centers. These are more or less required applications. Implementation of MODE will radically change this leave and payroll application.

Our largest current use for microfilm is in the working tool applications rather than recordkeeping uses. Some of these are use of General Land

Office field note films, Bureau of Land Management survey note films, and survey plat and township plat films in our land management activities. These applications primarily involve use of film that is already available to us from the Bureau of Land Management. It is mostly on 35 mm.

Also, we have some use being made of microfilm in such areas as transportation systems maps; recreation site plans; and engineering designs, drawings, and plans.

At present, we have a complete complement of equipment in only one Region. This consists of a late model planetary camera and accessory equipment, aperture card mounting machine viewers, film splicers, and reader-printers. The balance of our equipment consists of a few reader-printers and desk viewers, but no cameras, in about five other Regions.

For the present, we see no strong need for a microfilm systems for letter size material. Our records management system is relatively modern and is working quite well. We are quite well satisfied with the service provided by the Federal Records Centers in this area. The small applications we have in the records area are on 16 mm and are being done satisfactorily with commercial service.

As I indicated earlier, we have a wider range of possibilities in the working tool applications. These are mostly in timber management, recreation, lands work, and in several research areas. Most of these applications involve large plats or map sheets which are continually used on a day-to-day basis. Implementing any of the proposals would require considerable camera work at the Regional Office level, reader-printers in the Supervisors' Offices and Regional Offices, and readers at our Ranger District Offices. To go this far could easily cost us just a million dollars investment in equipment alone.

Faced with this potential price tag, you can see we need to exercise considerable caution in systems design, selecting the payoff applications, and designing systems so that our personnel can make maximum use of the equipment. There are some other considerations we are keeping in mind. First, the equipment must be compatible for all our uses. For example, there are a lot of fine systems using 16 mm film. This equipment is used primarily for filming documents. However, it does not appear suitable to us for engineering drawings and the like. Also, there is excellent 35 mm equipment for the larger material. This is a lot more expensive than the 16 mm for document filming. Also, the material we would have to film would vary in size from 3½" x 7" to 24" x 48" and larger. In any case, we have quite a variety of applications and would want to acquire equipment that would fit as many of these as possible, including the use of film acquired or available to us from other sources.

Secondly, we feel there needs to be standardization among our offices. Our offices are scattered and we would have needless confusion and

higher cost if each went its own way. Also, we need to consider other agency and Department standards in setting standards. This is illustrated by our extensive use of Bureau of Land Management films.

The third consideration is the availability and cost of commercial filming facilities.

Fourth, what kinds and combinations of machines are needed at what field organizational levels? This comes back to our approach on the total systems design, and this will govern what we need.

Fifth, is the actual savings that we might expect to capture in saving storage space, and other possible savings. In other words, there is no saving if we keep existing material and then add microfilm to it.

Finally, there is the possible improvement in product quality, service, and so on, and the possible different products that would be an improvement over what we now have.

Our plans, now, are to study these major applications that have been proposed and determine precisely if, and how, microfilming will be advantageous to us. The orientation of our study is toward meeting all of the Forest Service's needs on a coordinated basis for the foreseeable future, with emphasis on tangible savings in dollars and manpower as the primary criteria.

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C. E. Wylie - Office of Plant and Operations -

You might have the impression that the Office of Plant and Operations is launching a microfilming program. That isn't the case. What we are trying to do is provide agencies of this Department with leadership and guidance in establishing a program of microfilm management. The objectives of such a program are to help you recognize the potential usefulness of microfilm and to assure sound management of microfilming, so we get the most out of it for our money.

Plant and Operations Memorandums 74 and 76 which I am sure you have seen, inaugurated our program. The first step in this program, is to get an inventory of all microfilm equipment in the Department and its location. We propose to publish that information, and we think it will be useful to you. It isn't inconceivable that some of you have equipment that can be utilized by others. This will be particularly true of agencies like the Forest Service, with plans or facilities for complete microfilm operations.

Also in the making is an inventory of the microfilming operations, themselves. Many of you don't know what microfilming is going on in your own agencies. I know that, because I have talked to many of you. I know that you are just as interested as we are, in finding out exactly how much and what kind of microfilming is going on. And I predict that some of you will be surprised at what we learn. We think these inventories will be very useful.

The second step, and an important objective of our program, is to institute the appraisal of proposed microfilming activities before work is started or money is committed. Appraisal will consist of an agency operations appraisal at the working level, an agency control appraisal at the top level, and a Plant and Operations review. Appraisal will be made on Form AD-9, which we have developed for this purpose and attached to Plant and Operations Memorandum No. 76.

Form AD-9, Microfilm Project Appraisal Report, has 29 appraisal items on it. These items provide a systematic means for assembling facts you need to know before committing yourself to a microfilm project. Such information includes the kind of material, its nature, its condition, its age, its color, whether there are duplicate copies available, where its going to be used, where the microfilm will be used and how, and the by-products from it. All of these things, we feel, need to be considered before you go into a microfilm project.

The Forest Service provided us the facilities for a pilot study of the appraisal approach in Region 6 in Portland. We asked Regional employees to execute the appraisal form and to report on their experience in using it. I think that their comments on their experience might be interesting to you. Marvin Smith, Assistant Regional Forester, said "The results of the questionnaire indicate that a thorough survey of each kind of material should be made by a thoroughly trained individual or group." The present appraisal form is an outgrowth of that pilot study.

The Office of Plant and Operations recognizes the need for training and standards. So does GSA. Both agencies are starting work on the development of guidelines. To the extent possible, we will collaborate on this effort, so as to provide agencies at the earliest possible date, with the technical guidance they need, to assure a sound program. Agencies will have a chance to review our guideline material, prior to issuance, and will be invited to make suggestions for assuring its adequacy.

We have joined the National Microfilm Association. Perhaps some of you already belong, I think the Library does. We feel that the Association will provide us, through its conventions, its conferences, and through its literature, a great deal of useful and interesting information. We will make this information available to you, as we will information from other sources, such as this reprint on microfilming from Administrative Management Magazine. We have a supply of these reprints, if any agency wants additional copies for redistribution. We will appreciate your bringing similar materials to our attention, for possible Department-wide distribution.

We will arrange equipment demonstrations from time to time, such as the one which follows this meeting. We will do all that we can to make you knowledgeable and skilled in the business of microfilming, and we will appreciate all the help and cooperation you can give us.

We regard this project as a significant management undertaking, with potential benefits to the whole Department.

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Questions and Answers

Q. I would like to ask Jack when the GSA handbook and workshop will be ready? Before the end of the year?

A. I doubt it very much, but they were scheduled for June 30 of this year.

Q. I would like to know from your association with the various microfilm manufacturers is there any microfilming company putting out a reader-printer that will reproduce color?

A. To my knowledge, No.

Q. Would you explain the yellow spotting on the 16 mm film?

A. Well, we call them measles, or the J-effect. We don't know yet what causes it. It affects some of the images on the film. It causes some distortion, and eventual loss of some characters, through destruction of emulsion. It appears at the beginning of the roll of film and, in some cases, goes throughout the whole roll of film. It does not appear, to my knowledge, on any film that we have generated and developed at the National Archives. It does appear on film manufactured by various manufacturers. This is a problem in the Archives, because we have accessioned quite a bit of 16 and 35 mm film. Incidently, it does appear on 35 mm too. I understand that Kodak has spent about $400,000 trying to find out why the defect occurs. They tell us that if they give the film a gold treatment, the defect can be eliminated. But the problem is, what to do about the existing film we have on hand? Are we going to go through this gold treatment process, or is Recordak or is Remington Rand, or Bell and Howell, or Dupont going to do it? It is a serious problem. For the time being, we are not doing any disposal microfilming until the problem is resolved.

Q. Social Security Administration is credited with being able to provide information on anyone in the country within 40 seconds. Are the SSA information retrieval problems comparable to the problems of other organizations that have many diversified types of information to file and retrieve, like this Department has?

A. The BOASI application involves a tremendous volume of records. And they get a great many requests for information, per day, such as: I have lost my Social Security number, what is it? Or, fifteen years ago, I worked in private industry and I would like

to know how many quarters I have? So, in a matter of two or three seconds, they can locate your file and pull it out. The system of retrieving information depends a lot on how fast you want to get it. If you want to get it in a matter of a second or two, then I think you need a sophisticated system. But if the factor of time is less critical, you need a less sophisticated system.

Q. When I was in St. Louis the Records Center there, I was told a little about the cost of microfilming. Among the things mentioned was the high cost of preparing materials for microfilming. For example, he indicated that the removing of staples, clips, unfolding, taking out wrinkles and that sort of thing could make as much as 100 or 200 percent difference in the cost of the microfilming job. Do you have something on that?

A. Well, off hand, I don't have any exact cost figures because a lot depends on the project involved. I know that we figured out a project here for Federal Extension Service, about 4 or 5 months ago, and I think about 50% of the cost went into the preparation. The rule of thumb is as follows. Our experience indicates that, on preparation, it takes about two employees to keep one camera busy in an eight hour working day. That is a ratio of two to one. So, let's say the camera operator gets roughly $3.00 a hour, which is $24 dollars a day. Preparation cost will run twice that or $48 per day, per cubic foot. But if the material were not clipped, were not stapled, not folded, and just had to be lifted from a stack to the camera, you would not have that problem.

Q. Are there any publications on microfilming that you can recommend to us?

A. There are two fine publications that I recommend very strongly that you try to obtain. One is TM12-257 that is the Department of Army Microfilming Manual. The next is a Guide to Microreproduction Equipment. That book is published by the National Microfilm Association.